Application of

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on

DECORATIVE MOLDING, DECORATIVE OVERLAYS AND FOILS THEREFOR AND METHODS AND APPARATUS FOR MAKING THE SAME

CROSS REFERENCE TO RELATED APPLICATIONS

This application is a non-provisional application under 35 U.S.C. 111 (a) of a Provisional Application for Patent, Serial Number 60/184,021 filed February 22, 2000.

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to decorative moldings and methods of making decorative moldings. One method comprises the steps of layering at least one hot transfer foil onto a wrapping film thereby creating a layered wrapping film, thereafter stripping away a carrier of the hot transfer foil, applying an adhesive to an opposite side of the layered wrapping film and wrapping the layered wrapping film about a substrate to be decorated.

2. Prior Art Statement

It is known and practiced by the inventors of this invention to decorate a substrate to be used as a picture frame or building trim piece by providing a decorative surface coating of a thin coat of paint or ink on a thermoplastic or paper transfer carrier and thereafter transferring the decorative surface coating onto at least a portion of a substrate to be decorated while stripping away the carrier.

It is also known and practiced by the inventors to paint a substrate with at least one coat of a specific color of paint, provide a decorative surface coating of a thin coat of paint or ink on a thermoplastic or paper transfer carrier and thereafter transfer the decorative surface coating onto the painted substrate while stripping away the carrier to get a combined effect of the specific color of paint and the thin coat of paint or ink.

It is further known and practiced by the inventors of this invention to provide a decorative surface coating comprising a thin coating of paint or ink on a thermoplastic or paper sheet, applying an adhesive to an opposite side of the sheet and thereafter adhering the decorative surface coating and the sheet onto a substrate to be decorated.

It is also known and practiced by the instant inventors to provide a decorative surface coating comprising a thin coating of paint or ink on a thermoplastic or paper sheet, applying an adhesive to an opposite side of the sheet, adhering the decorative surface coating and the

sheet onto a substrate to be decorated and thereafter apply a paint to at least a portion of the decorative surface coating.

Additionally, it is known and practiced by the inventors to wrap over a portion of a substrate to be decorated with a decorative surface coating of a thin coat of paint or ink on a thermoplastic or paper transfer carrier, applying a composition molded into a specific pattern to an unfinished portion adjacent the portion wrapped with the decorative surface coating, drying the composition, painting the composition, thereafter transferring at least a portion of a second decorative surface coating onto at least a portion of the composition.

The inventors are aware that it is known to provide an embossing foil comprising a backing film, a decorative lacquer layer and an adhesive layer wherein the backing film has lacquer applied regionwise to a conventional 3-dimensional pattern thereto such that only those parts not covered by lacquer produce an embossed effect. For instance, see the U. S. Patent 5,635,282 issued on 03/07/1997 to Suess, et al.

Also known is the selective transfer process for applying a metallic film to the raised print produced in a xerographic process described in U. S. Patent 4,724,026 issued on 02/09/1988 to Marshall Nelson. The adhesive side of a transfer sheet is applied face to face with the xerographic sheet with heat and pressure applied to transfer the metallic film from the transfer sheet selectively only to the print on the xerographic sheet. The heating causes the toner to become tacky and thus only applies the film carried on the carrier to the portions containing the toner.

Further known is to produce a texture coat to the adhesive layer of a transfer foil which deflects the multiple print coats above the adhesive layer giving an effect of an embossed foil. The texture coat is a thermoplastic laid down with an embossing roller and is several times thicker than the total thickness of the remaining coats. For instance see the U. S. Patent 4,084,032 issued on 04/11/1978 to John Pasersky.

Yet further known is to produce multi-layered foil laminate coverings for packages wherein both sides of a plastic film material has printing thereon. A first surface is printed and overlaid with an adhesive with this surface then applied to a foil web. The second surface of

the plastic film is then printed, overlaid with a lacquer and a dry bond adhesive applied to the lacquer layer. For instance, see the U. S. Patents 5,653,844 issued on 08/05/1997 and 5,908,527 issued on 06/01/1999 to Richard Abrams.

Additionally, it is known to mark a surface having at least two layers of differently-colored lacquer thereon by exposing region-wise the layer of lacquer remote from the surface to laser radiation to expose the layer of lacquer proximate the surface. For instance, see the U. S. Patent 5,985,078 issued on November 16, 1999 to Suess, et al.

Finally, it is known and practiced by the inventors to wrap over opposite edges of a substrate to be decorated with a decorative surface coating of a thin coat of paint or ink on a thermoplastic or paper transfer carrier, providing an unfinished portion of the substrate between the two edges, applying a composition molded into a specific pattern to the unfinished portion, drying the composition, painting the composition, thereafter transferring at least a portion of a second decorative surface coating onto at least a portion of the composition.

SUMMARY OF THE INVENTION

Manufacturers of lineal picture frame moldings and other decorative moldings utilize numerous processes including application of a stain or paint upon of a substrate, hot embossing of a pattern onto a substrate through the use of a hot steel roller intended to enhance the appearance, embossing of a composition such as wood putty applied to a substrate and thereafter applying a finish to the embossed pattern, hot foil stamping of a variety of patterns finished directly onto a profiled substrate through the use of a heated, contoured silicone wheel and wrapping of a surface paper or thermoplastic material using a hot melt adhesive and pressure wheels to wrap the material around the molding. Any of the substrates hereinbefore mentioned usually has a profiled surface extending longitudinally of the substrate. The substrates are various lengths of wood or fiber board of various compositions.

In the instant application, industry standard terms are utilized to refer to heat transfer foils, wrapping films and decorative surfacing. Thus, a wrapping film is a calendered or

extruded rigid vinyl film printed with an ink or having a pattern embossed thereon. A decorative foil is similar and has been produced of a cellulose paper, these now collectively herein referred to as wrapping films. A heat transfer foil or hot stamping foil is a coating system applied to a thin Mylar film called a carrier wherein the coating system has been reverse applied to the carrier with a release coat first applied, a decorative pattern then applied followed by a ground coat and an adhesive. Finally, a substrate shall refer to a panel or panel product manufactured from wood fibers or particles combined with a suitable binder and bonded under heat and pressure.

The known processes have served the decorative molding industry well however, there are a limited number of inexpensive decorative surface coatings available on a thermoplastic or paper transfer carrier or wrapping films which provide a simulated effect of a combination of decorative moldings. It has been found that sufficient coatings and films to satisfy a continuing growing customer demand for inexpensive real wood grain and other inexpensive combination decorative surface effects are not available in the industry without costly multistage production processes.

Therefore, a significant object of this invention is to provide a method of applying a variety of different effect coatings to separate sections of the same style of substrate to be decorated utilizing one machine set up by utilizing a different foil created by the teachings of this invention on the separate profile sections of the substrate to produce a different look to the different specific profile sections.

Still another significant object of this invention is to provide a method of applying a combined foil surface effect to a surface of a profile utilizing a single head wrapping machine.

Another significant object of this invention is to produce small quantities of custom laminated decorative wrapping foils in order to satisfy a growing demand for a variety of patterns, profiles, embossing and colors.

It is an object of this invention to layer a decorative surface coating of at least one thin coat of paint or ink on a thermoplastic or paper transfer carrier onto a wrapping foil thereby creating a layered wrapping foil, strip away the carrier, apply an adhesive to an opposite side

of the layered wrapping foil, wrap the layered wrapping foil about a substrate to be decorated thereby providing many more pattern and color combinations than is available in industry stock foils.

It is an object of this invention to layer a decorative surface coating of at least one thin coat of paint or ink on a thermoplastic or paper transfer carrier onto a decorative foil thereby creating a layered decorative foil, strip away the carrier, apply an adhesive to an opposite side of the layered decorative foil, wrap the layered decorative foil about a substrate to be decorated thereby providing many more pattern and color combinations than are available in industry stock decorative foils.

Still another object of this invention to provide a decorative molding wrapping foil comprising at least one hot transfer inked foil carried on a carrier, the at least one hot transfer inked foil having a portion of the ink thereon removed prior to being laminated onto a planar wrapping foil thereby creating a laminated wrapping foil having portions of the base color of the planar wrapping foil showing therethrough.

Yet another object of this invention to provide a decorative molding wrapping foil comprising at least one hot transfer inked foil carried on a carrier, the at least one hot transfer inked foil having a substantially all of the ink thereon removed prior to being laminated onto a planar wrapping foil thereby creating a laminated wrapping foil having substantial portions of the base color of the planar wrapping foil showing between inked lines thereon to simulate a distressed pattern on a wood grain wrapping foil or a cracked paint pattern on a planar wrapping foil.

It is another object of this invention to provide a decorative molding by the method comprising the steps of layering at least opaque or translucent one hot transfer inked foil onto a wrapping foil thereby creating a intermediate layered foil, stripping away the carrier from the inked foil and thereafter layering at least one other opaque or translucent transfer foil onto the intermediate layered foil, stripping away the carrier from the other transfer foil thereby creating a layered wrapping foil for application to a substrate, applying an adhesive to an opposite side of the layered wrapping foil and wrapping the laminate about a substrate to be

decorated.

It is yet another object of this invention to provide a decorative molding by the method comprising the steps of layering at least one opaque or translucent hot transfer inked foil carried on a thermoplastic or paper carrier onto an embossed wrapping foil thereby creating a layered embossed foil, thereafter stripping away the carrier from the hot transfer foil, applying an adhesive to an opposite side of the layered wrapping foil and wrapping the layered wrapping foil about a substrate to be decorated.

A further object of this invention to provide a decorative molding by the method comprising the steps creating a pattern directly upon the substrate to be decorated in wrapping machine by applying a thin layer of hardenable material directly upon the substrate, cooling the hardenable material, forming the cooled hardenable material into a raised pattern surrounding depressions using a forming roller and thereafter applying ink from hot transfer roll onto the raised pattern.

Still a further object of this invention to provide a decorative molding by the method comprising the steps creating a pattern directly upon the substrate to be decorated in wrapping machine by applying a thin layer of hardenable material directly upon the substrate, applying ink carried on a carrier to the still fluid hardenable material and forming the hardenable material into a raised pattern surrounding depressions using a forming roller upon a back side of the carrier and thereafter cooling the hardenable material and stripping away the carrier.

An additional object of this invention to provide a decorative molding by the method comprising the steps of layering at least one opaque and/or translucent hot transfer inked foil carried on a thermoplastic or paper carrier onto an embossed wrapping foil thereby creating a layered wrapping foil, applying a force to a heated pressing roll on the surface of the hot transfer foil carrier opposite the surface having the hot transfer inked foil applied thereto to provide for dramatic embossing and color effects to the texture of the surface of the embossed foil and adhere the hot transfer inked foil to at least a part of the surfaces of the embossed wrapping foil, stripping away the carrier from the hot transfer foil, applying an adhesive to

an opposite side of the layered wrapping foil and thereafter wrapping the layered wrapping foil about a substrate to be decorated.

Still a further object of this invention to provide a decorative molding by the method comprising the steps of layering at least one hot transfer inked foil carried on a thermoplastic or paper carrier onto a wrapping foil wherein random lines have been removed from the inked surface of the at least one hot transfer inked foil thereby creating a layered wrapping foil to simulate a cracked painted surface, stripping away the carrier from the hot transfer foil, applying an adhesive to an opposite side of the layered wrapping foil and thereafter wrapping the layered wrapping foil about a substrate to be decorated.

It is still a further another object of this invention to provide a decorative molding by the method comprising the steps of layering at least one hot transfer inked foil carried on a thermoplastic or paper carrier onto an embossed wrapping foil thereby creating a layered wrapping foil, stripping away the carrier from the hot transfer foil and aggressively brushing the surface of the layered wrapping foil on the surface having the hot transfer inked foil applied thereto to vary the texture of the surface of the layered embossed wrapping foil and remove loose portions of the hot transfer ink from some of the surfaces of the layered embossed wrapping foil, applying an adhesive to an opposite side of the wrapping foil and wrapping the layered embossed wrapping foil about a substrate to be decorated.

Finally, it is also an object of this invention to prepare profile specific embossed patterns which may also be foiled with profile specific inks by separately profiling specific sections of an unembossed wrapping paper or foil, applying at least one hot transfer inked foil carried on a thermoplastic or paper carrier onto at least one specific profile embossing thereby creating a layered embossed wrapping foil having specific profile embossed patterns thereon, stripping away the carrier from the hot transfer foil, brushing at least one specific profile embossing to remove loose portions of the hot transfer ink therefrom, applying an adhesive to an opposite side of the wrapping foil and wrap the layered embossed wrapping foil about a substrate to be decorated.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view of one apparatus of this invention showing profile rolls, a spray nozzle, a roll of a first hot transfer foil, a second roll of a wrapping foil, a third roll for receiving another hot transfer foil, receiving guide rolls, a pressing roll, a back up drive roll, a series of laminate receiving guide rolls, a take up roll for receiving a layered wrapping foil produced by the apparatus and a take up roll for receiving the carrier stripped from the layered wrapping foil. A brushing roll is shown in phantom in two places.

Fig.2 is a frontal plan view of the rolls of the apparatus of this invention showing a roll of a first hot transfer foil, a second roll of a wrapping foil, a threading of the first hot transfer foil and the wrapping foil through the bight of a heated pressing roll and a back up drive roll and through the bight of a brushing roll and a backing roll, the laminated foil produced thereof threaded onto a roll for receiving the layered wrapping foil and the carrier threaded onto a roll for receiving the carrier stripped from the layered wrapping foil.

Fig. 3 is a top plan view of a portion of an embossed foil as received on the left hand side thereof, a portion of the embossed foil after layering with an inked foil with the apparatus of Fig. 1 in a medial portion thereof and a portion of the embossed foil after brushing the layered surface with the brush roll shown in Fig. 2 on the right hand side thereof.

Fig. 4 is a perspective view of a portion of a decorative frame piece having a random embossed pattern applied thereon, the embossed pattern having a hot transfer inked foil applied thereto. The decorative frame piece may be made by the apparatus of Fig. 1 wherein a laminated decorative wrapping is wrapped about the substrate or the decorative frame piece may be made directly in the apparatus of Fig. 10.

Fig. 5 is a frontal plan view of the rolls of the apparatus of this invention showing a roll of a first hot transfer foil, a second roll of a wrapping foil, a third roll of a second hot transfer foil, a threading of the first hot transfer foil, the second hot transfer foil and the wrapping foil through the bight of a heated pressing roll and a back up drive roll and through the bight of a brushing roll and a backing roll, the laminated foil produced thereof threaded onto a roll for receiving the layered wrapping foil and the carrier threaded onto a roll for receiving the carrier stripped from the layered wrapping foil.

Fig. 6 is a perspective view of a portion of a decorative molding having a layered embossed foil wrapped therearound wherein the layered embossed foil has been layered with at least two inked foils in side by side relationship with the apparatus of Fig. 5.

Fig. 7 is a frontal plan view of the rolls of the apparatus of this invention showing a roll of a first hot transfer foil, a second roll of a wrapping foil, a threading of the first hot transfer foil about a profiling roll under a brushing roll and thereafter with the wrapping foil through the bight of a heated pressing roll and a back up drive roll and through the bight of a brushing roll and a backing roll, the laminated foil produced thereof threaded onto a roll for receiving the layered wrapping foil and the carrier threaded onto a roll for receiving the carrier stripped from the layered wrapping foil.

Fig. 8 is a perspective view of a portion of a decorative molding having a layered inked foil wrapped therearound wherein the layered inked foil has had a portion of the ink thereof randomly removed by the apparatus of Fig. 7.

Fig. 9 is a perspective view of a portion of a decorative molding having a layered inked foil wrapped therearound wherein the layered inked foil has had a portion of the ink thereof removed in a specific pattern by the apparatus of Fig. 7.

Fig. 10 is a perspective view of another apparatus of this invention showing a spray nozzle, a roll of a first hot transfer foil, a pressing roll, a piece of frame material, a device containing a series of profiling rolls for pressing the hot transfer foil against the contours of the piece of frame material, a take up roll for receiving the carrier stripped from the laminated piece of frame material.

Fig. 11 is a partial perspective view of one profile cut into a removable profiling roll used in the apparatus of Fig. 1 and Fig. 7.

Fig. 12 is a partial perspective view of a portion of a decorative molding showing a profile formed into a hardenable substance through a decorative film using the apparatus of Fig. 10.

Fig. 13 is a frontal plan view of the rolls of the apparatus of this invention showing a roll of a wrapping foil, a threading of the wrapping foil about a profiling roll under a sanding

roll and thereafter being flooded with a stain on the sanded surface thereof in a staining bath, the stain wiped by a wiper and dried in the bight of a heated pressing roll and a back up drive roll the altered foil produced thereof threaded onto a roll for receiving the altered wrapping foil.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

While the various features of this invention are hereinafter described and illustrated as a decorative foil for a molding and method of producing the decorative foil or decorative molding comprising the steps of layering at least one hot transfer inked foil onto a wrapping foil thereby creating a layered wrapping foil, applying an adhesive to an opposite side of the wrapping foil, wrapping the layered foil about a substrate to be decorated and thereafter stripping away a carrier of the hot transfer inked foil, it is to be understood that the various features of this invention can be used singly or in various combinations thereof layering at least one hot transfer inked foil onto a wrapping foil thereby creating a layered foil as can hereinafter be appreciated from a reading of the following description.

Referring now to Fig. 1, the apparatus of this invention is generally shown by the numeral 10 and comprises a first roll 20 of a hot transfer foil 25, a second roll 30 of a wrapping or decorative foil 35, a layering pinch roll set 100 comprising a solid bottom roll 50 and a heated top roll 40, a foil carrier stripping roll 70 and a take up roll 60 for taking up the decorative layered or laminated wrapping foil 65. In the method of this invention, first roll 20 has at least one thin coat of paint or ink 27 represented by cross hatching 26 applied to the underside 24, as viewed on top 22 of roll 20 in Fig. 1, of a thermoplastic or paper transfer carrier 75 rolled upon roll 20, ink 27 adapted to be mated with and transferred to a surface 34 of wrapping or decorative foil 35. Referring also to Fig. 3, a pattern 37 on wrapping foil 35 is represented by lines 36, wrapping foil 35 having been wound upon roll 30 in a separate process. Though wrapping foil 35 is preferably purchased from one of the numerous manufacturers of patterned decorative wrapping foils known in the industry, wrapping foil 35 may be made by passing a flat wrapping foil 35 between at least one patterning roll 111, 112 and a backing roll 113 prior to joining ink 27 to surface 34. Patterning rolls 111, 112 and backing roll 113 are shown in dashed lines between second roll

30 and a first guide roll 23, these rolls 111 - 113 added to apparatus 10 when patterning of wrapping foil 35 is desired. Likewise, first transfer foil 25 with carrier 75 has also been previously wound upon roll 20 in a separate process, preferably purchased directly from a number of hot transfer coating and wrapping companies well known in the industry. Hot transfer foil 25 may be any known transfer foil utilized in the industry and hence may comprise solid color inks or paints, translucent inks or paints, patterned inks or paints, randomly interrupted solid or translucent inks or paints, variegated inks or paints or combinations of the above. Likewise, wrapping foil 35 may comprise any known wrapping foil including but not limited to solid color inks or paints, translucent inks or paints, patterned inks or paints, randomly interrupted solid or translucent inks or paints, randomly embossed solid foils, patterned embossed solid foils interrupted embossed foils and the like.

Continuing to refer to both Figs. 1 and 3, roll 30 of wrapping foil 35 is mounted upon shaft 31 of apparatus 10 with pattern 37 preferably facing heated top roll 40 while backside 85 bears against solid bottom drive roll 50. Wrapping foil 35 is fed around guide rolls 23, 29 and into the bight 17 of heated top roll 40 and solid bottom drive roll 50 and directed toward a series of guide rolls 62 around roll 63 toward take up roll 60 to be wound thereupon after ink 27 of hot transfer foil 25 has been transferred to surface 34. Shaft 21 has roll 20 of hot transfer foil 25 and carrier 75 wound thereupon with a leading edge of hot transfer foil 25 also fed around guide rolls 23, 29 and into bight 17 of rolls 40, 50. Roll 20 is placed on shaft 21 such that surface 24 having ink 27 thereupon is directed toward surface 34 of wrapping foil 35. Ink 27 is therefore only visible on top side 22 of roll 20 as it is on the underside surface 24 of carrier 75 and hence is not visible except as shown in Fig. 1. Surfaces 24 and 34 are thus arranged in face to face relationship such that as transfer foil 25 and wrapping foil 35 come into contact in bight 17, ink 27 is transferred to pattern 37 of wrapping foil 35 creating layered or laminated foil 65 of the two separate materials 27, 37. As hot transfer foil has ink 27 sandwiched between a release coat on carrier 75 and an adhesive as a top layer coat, ink 27 readily transfers to surface 34 of wrapping foil 35. Wrapping foil 35 is then utilized to wrap at least a portion of an elongated, profiled section of framing or trim substrate utilized in picture frames or building construction as is fully appreciated by those skilled in the art.

In order that ink 27 on hot transfer foil 25 transfers to wrapping foil 35, heated top roll 40 is heated by a heating plate 45 to a transfer temperature commensurate with the ink 27 being transferred. Heating plate 45 is mounted in close contact with roll 40 and has a heating coil energized by an energy source. As shown in Fig. 1, heating plate 45 curves about at least a portion of roll 40 and has the heating coil mounted thereupon wherein the heating coil is preferably an electrical coil supplied with electrical energy from an energy source such as line voltage from any electrical source. Alternately, heating plate 45 could be heated by a steam or hot water source wherein the heating coil comprises a fluid heat transfer coil. Heated top roll 40 is preferably a soft silicone roll which can deform slightly as foils 25, 35 pass through bight 17 such that ink 27 may be transferred to the exterior surfaces 33, 39 of pattern 37 as desired. The pressure of heated roll 40 against bottom drive roll 50 may be changed to transfer ink 27 to substantially all of the surfaces 33, 39 of pattern 37 or part thereof in order to create different effects for layered foil 65.

After foils 25, 35 pass through bight 17 and ink 27 is hot transferred to pattern 37, carrier 75 is usually stripped away from layered foil 65 by pulling carrier 75 away from layered foil 65 and passing carrier 75 around roll 64 toward carrier roll 70. Carrier 75 is then wound upon carrier roll 70 to be discarded or recycled for a carrier for another ink or foil. Carrier 75 may also be wound upon roll 60 with layered foil 65 by allowing the complete layered foil comprising layered foil 65 carrier 75 and wrapping foil 35 to proceed along series 62 of rolls around roll 64 to take up roll 60. In either case, layered wrapping foil 65 is wound upon take up roll 60 to be utilized in a separate wrapping process. Though a separate wrapping process is preferable to minimize the number of machine setups in the production line of wrapping a section of a substrate to be decorated, it is to be fully understood here that the apparatus 10 of this invention could be utilized in conjunction with a wrapping machine wherein a substrate to be decorated is fed into the wrapping machine underneath or in line with apparatus 10 and layered wrapping foil 65 wrapped thereupon substantially immediately after layered wrapping foil 65 is created in bight 17. In such a combination machine, take up roll 60 would not be utilized as layered wrapping foil 65 would have been directly applied onto a substrate to be decorated though carrier roll 70 would be utilized to receive carrier 75

upon completion of the wrapping process.

Still referring to Figs. 1 and 3, it can be readily observed that after passing through bight 17, layered wrapping foil 65 has both pattern 37 and ink 27 thereupon as represented by lines 36 and cross hatching 26 respectively. It is understood here that ink 27 and pattern 37 would normally be visible between carrier 75 and take up roll 60 though this representation is omitted from Fig. 1 for clarity. It is also readily apparent that once ink 27 has been transferred to pattern 37 and layered wrapping foil 65 wound upon take up roll 60, take up roll 60 could be moved to shaft 31 replacing roll 30 with layered wrapping foil 65 whereby layered wrapping foil 65 becomes roll 30 and wherein apparatus 10 could be utilized to transfer another hot foil transfer ink 27 to layered wrapping foil 65. In fact, it is contemplated by the teachings of this invention to apply ink 27 from at least one hot transfer foil 25 to at least one pattern 37 of a wrapping foil 35 wherein multiple passes through apparatus 10 would result in multiple transfer inks 27 being applied to at least one pattern 37 or multiple inks 27 transferred to more than one pattern 37. Thus it is possible to create a multitude of layered wrapping foils 65 utilizing combinations of hot transfer foils 25 and wrapping foils 35 currently available on the market, this multitude of layered wrapping foils 65 providing a greater variety of decorative coatings for picture frames and building trim pieces.

Referring now to Figs. 2 and 3, an alternate method of enhancing the effect of applying ink 27 to pattern 37 to produce a layered wrapping foil 65 for a decorative molding comprises the steps of layering at least one hot transfer inked foil 25 carried on thermoplastic or paper carrier 75 onto an embossed wrapping foil 35, stripping away carrier 75 thereby creating a layered embossed wrapping foil 65 as herein recited. This alternate method further applies a brushing force to surface 34 directly on ink 27 after carrier 75 has been stripped away, varying the force of a brushing wheel 80 brushing surface 34 of hot transfer ink 27 to provide for dramatic embossing and color effects to the texture of surface 34 of embossed foil 35 by removing portions of ink 27 not fully adhered to parts of surfaces 33, 39 of embossed wrapping foil 35. As with other wrapping foils 35 and layered wrapping foils 65 of this invention, an adhesive is applied to opposite side 86 of layered wrapping foil 65 and layered wrapping foil 65 is wrapped about a substrate to be decorated. Referring now to Fig. 3 to

illustrate the dramatic effect of the teachings of this alternate embodiment of the invention, layered wrapping foil 65 is shown on the right hand side 82 and center section 93 of a line 84 as if layered wrapping foil 65 and wrapping foil 35 had been removed from bight 17 of rolls 40, 50 before completion of the transfer of ink 27 to all of wrapping foil 35. Center section 93 between line 84 and line 92 represents the portion of layered wrapping foil 65 between bight 17 of rolls 40, 50 and brush roll 80 after stripping away carrier 75, this portion 93 appearing to have a greater coverage of ink 27 on surfaces 33, 39. Referring now also to Fig. 2, brushing roll 80 is shown in contact with surface 34 after layered wrapping foil 65 has passed through bight 17 of rolls 40, 50 and ink 27 has been transferred to surface 34, brushing roll 80 adapted to force loose amounts of ink 27 out of depressed surfaces 39. Thus, ink 27 remaining adhered to surface 33 takes on a different appearance as shown on right hand side 82 of line 84 as opposed to these same surfaces 33 on left hand side 83 and in center section 93. Similarly, depressed surfaces 39 retain little of ink 27 thereon depending upon the force of brushing roll 80 against surface 34 and likewise take on a different appearance as shown in depressed surfaces 39 on right hand side 82 as opposed to these same depressed surfaces 39 on left hand side 83 and center section 93. After completing the desired brushing of layered wrapping foil 65 in Fig. 2 to produce the layered wrapping foil 65 shown on the right hand side 82 in Fig. 3, layered wrapping foil 65 is wound upon take up roll 60 for use in wrapping about a substrate in a subsequent process to provide a decorative molding of this invention. Though one dramatic effect of the teachings of this invention is shown in Fig. 3, it is possible to create different effects by varying the amount of brushing force. For instance, it is also possible to provide a decorative molding comprising the steps of layering at least one hot transfer inked foil 25 carried on thermoplastic or paper carrier 75 onto embossed wrapping foil 35 thereby creating layered wrapping foil 65, aggressively brushing surface 34 of layered embossed wrapping foil 65 having ink 27 applied thereto to remove loose ink 27 and deepen the texture of surface 34 of embossed foil 35 by providing a polishing of ink 27, applying an adhesive to opposite side 86 of the wrapping foil 35 and wrapping layered embossed wrapping foil 65 about a substrate to be decorated wherein surface 34 of layered embossed wrapping foil 65 is exposed and opposite side 86 is adhered to the substrate to be

decorated. Though only one pattern 37 is shown in Figs. 2 and 3, it should be readily apparent that various other patterns 37 may be utilized in the method and apparatus of this invention to produce laminated decorative molding foils 65 of different patterns having dramatic effects not currently available for embossed foils 35.

It is understood in the above embodiments, heated top roll 40 presses against top 28 of carrier 75 transferring a portion of ink 27 to the portion of pattern 37 contacted by ink 27, ink 27 adhering to pattern 37 as an adhesive is the outside layer in a hot transfer inked foil 25 and thus faces surface 34 of pattern 37. Heated top roll 40 may be spaced from bottom drive roll 50 by an amount equal to the overall thickness of wrapping foil 35 having pattern 37 thereon and ink 27 and carrier 75 such that only the portion of ink 27 contacting the outermost raised surfaces 33 of pattern 37 is transferred thereto. If a greater transfer of ink 27 to pattern 37 is desired, heated top roll 40 may be spaced from lower drive roll a lesser distance, for instance equal to the overall thickness of wrapping foil 35 less the depth of pattern 37, ink 27 and carrier 75 such that substantially all of surface 34 of pattern 37 receives ink 27 thereon, ink 27 being adhered to pattern 37 by the hot transfer process well known in the art. In either case, transfer carrier 75 may then be stripped away from embossed layered wrapping foil 65 before embossed layered wrapping foil 65 is wound upon take up roll 60. Thus an inked, embossed decorative material is produced for wrapping about a substrate.

In one example of layered decorative molding wrapping foil 65 produced by the apparatus 10 and method utilized therewith, layered decorative molding wrapping foil 65 comprises at least one hot transfer inked foil 25 consisting of at least one thin coat of paint or ink 27 on a thermoplastic or paper transfer carrier 75 laminated onto an embossed or planar wrapping foil 35 thereby creating a laminated wrapping foil 65 wherein laminated wrapping foil 65 is wound upon a roll 60 for use in foil wrapping of a substrate 15 for use as picture frame element or building trim piece. Layered decorative molding foil 65 then has carrier 75 stripped therefrom for application to a substrate 15 wherein decorative wrapping foil 65 thereafter has an adhesive applied to a side 86 opposite decorative wrapping foil 65, decorative wrapping foil 65 then being wrapped about substrate 15 to be decorated. As the thin coat of paint or ink 27 may be any ink coating known in the industry, the apparatus 10

and method described herein provides many more pattern and color combinations than are available in industry stock foils. For instance, thin coat of paint or ink 27 may be translucent colors, opaque colors, metallic materials, variegated colors or iridescent colors. In another example, a decorative molding comprising at least one translucent hot transfer ink 27 is transferred onto a translucent wrapping foil 35 thereby creating a layered translucent wrapping foil 65 wherein an adhesive is applied to side 86 opposite inked surface 34 of wrapping foil 65, wrapping foil 65 then wrapped about a substrate to be decorated. In yet another example, a decorative molding comprising a hot transfer ink 27 is transferred onto at least one opaque or translucent wrapping foil 35 thereby creating a layered wrapping foil 65, carrier 75 then being stripped away, at least one other hot transfer ink 27 being transferred onto layered wrapping foil 65 wherein carrier 75 from the at least one other hot transfer ink 27 is stripped away thereby creating a multiple layered wrapping foil 65, multiple layered wrapping foil 65 thereafter made available for wrapping about a substrate to be decorated.

As recited above, roll 60 having layered wrapping foil 65 wound thereon may be placed upon shaft 21 and ink 27 from another hot transfer inked foil 25 applied thereto, however is it also possible to provide a method of applying a variety of different effect coatings to separate sections 32, 38 of wrapping foil 35 for applying to the same style of substrate to be decorated utilizing one machine set up by applying ink 27 from different foils 25 to the separate sections of wrapping foil 35 to produce a different look to the different sections 32, 38. For instance, referring now to Fig. 5 it can be readily appreciated that shaft 21 carries roll 20 of one inked foil 25 having ink 27 thereon and another shaft 19 carries roll 20' of another inked foil 25' having ink 27' thereon these two foils 25, 25' being slightly overlapped and fed together along with wrapping foil 35 into bight 17 of rolls 40, 50 and subject to pressing and/or brushing as is depicted. Referring now also to Fig. 6, as different inked foils 25, 25' have been applied to different sections of wrapping foil 35, take up roll 60 now will have a composite layered wrapping foil 65 having one section 32 with one ink 27 applied thereto and second section 38 having another ink 27' applied thereto. As carrier 75 has been stripped away from both sections 32, 38, layered wrapping foil 65 is ready to have adhesive applied to surface 86 and be wrapped about a substrate to be decorated having the

thus created separate sections 32, 38 applied to the substrate along a common line 91 between two contour portions 87, 88 of the substrate. It is readily apparent here that while a composite layered wrapping foil 65 may be made by providing three separate inked foils in the same manner as just recited for two separate foils and utilized for wrapping a substrate to produce different effects to separate portions 87, 88, 89 using only one wrapping head on a machine, one layered wrapping foil 65 could be wrapped about one portion 87 while another layered wrapping foil 65 could be wrapped about a second portion 88 while a third portion 89 could be wrapped with another layered wrapping foil 65 though three heads on a wrapping machine would be required. Thus, as is shown in Fig. 6, it is apparent that by the teachings of this invention, a combined foil surface effect may be applied to specific profiles of a substrate 15 to be wrapped utilizing a single head wrapping machine by applying one section 32 to portion 87, a second section 38 to portion 88 and a third section, if desired, to portion 89 to create a multiple embossed effect. For instance, layered wrapping foil 65 may comprise a raised patterned foil 35 having a red ink hot transferred to section 87, a blue ink hot transferred to section 88 and a white ink hot transferred to the section covering portion 89. It is desirable to overlap an edge 72 of one roll 25 over the other roll 25' in order to provide precise lines of demarcation 91, 90 between the different portions 87 - 89. It is only necessary thereafter to provide for proper alignment of edge 72 with a specific profile in the substrate to be decorated to provide for the composite layered substrate 15 of Fig. 6. Though up to three separate sections employing separate patterns and separate inks has been recited above, it is possible by the teachings of this ivention to provide for more than three separate sections and/or more than three separate inks by providing multiple patterns and multiple inked foils for the desired number of sections.

Referring again to Figs. 1 and 6, a profile specific embossed layered wrapping foil may be prepared from an unembossed wrapping paper or foil by passing unembossed wrapping paper between at least one profiling roll 111, 112 and a backing roll 113 thereby creating an embossed wrapping foil 35 having at least one embossed pattern 37 thereon. In Fig. 6, two patterns 37, 137 are shown applied to separate portions 87, 88, respectively, of substrate 15 although, of course only one pattern 37 or more than two patterns 37, 137 may be created.

At least one hot transfer inked foil 27 carried on a thermoplastic or paper carrier 75 is then applied onto at least one specific profile embossing 37, 137 thereby creating a layered embossed wrapping foil 65 having specific profile embossed patterns 37, 137 thereon. Carrier 75 is then stripped from hot transfer foil 25 and newly created surfaces 34, 134 may be brushed with a brushing roll 80 to remove loose portions of the hot transfer ink 27 therefrom though this step is optional in any of the processes stated above. Layered embossed wrapping foil 65 having the separate patterns 37, 137 provided thereon then has an adhesive applied to opposite side 86 of layered wrapping foil 65 and is thereafter wrapped about substrate 15 to be decorated. Profile specific layered embossed wrapping foil 65 is shown applied to substrate 15 in Fig. 6 wherein one specific profile embossing is applied to section 87 of substrate 15, another specific profile embossing is applied to section 88 and 89 though a third specific profile embossing may be applied to section 89. Each of sections 87 - 89 may have a different color or texture of ink hot transferred thereon in the apparatus of Fig. 1 wherein the different colors are aligned with the profile specific embossed patterns 37, 137. Of course, the multiple embossed patterns 37, 137 may have the same color or texture of ink applied thereto and therefore the noticeable dramatic effect between the adjacent profiles of substrate 15 is still readily observable. It should also be readily apparent that the apparatus of Fig. 1 may be utilized to apply a second profiling pattern 137 onto a first embossed pattern 37 wherein second profiled pattern 137 may then be decorated with at least one hot transfer inked foil 25. As can be fully appreciated by those skilled in the art, apparatus 10 can produce multiple effects upon a substrate and thus it is possible to produce small quantities of custom decorative layered wrapping foils 65 in order to satisfy a growing demand for a variety of patterns, profiles, embossing and colors.

Referring now to Figs. 1 and 4, a random pattern may be applied to a decorative foil by spraying a hardenable substance onto surface 34 of wrapping or decorative foil 35 prior to applying inked foil 25 thereto. For instance, a spray nozzle 11 applies a spray of a hardenable substance to surface 34 immediately after wrapping or decorative foil 35 is unwrapped from roll 30. The hardenable substance is preferably a hot melt glue but may be another material which can be liquified, sprayed through nozzle 11 and hardened after being

applied to wrapping or decorative foil 35. Upon laminating inked foil 25 to random lines 99 on wrapping or decorative foil 35 and stripping away carrier 75, a layered wrapping foil 65 of the teachings of this invention is made ready for wrapping about a substrate 15. In Fig. 4, the random pattern appears as random lines 99 on top of substrate 15 after having been decorated with inked foil 25 and wrapped about substrate 15. While the hardenable substance is still warm, inked foil 25 is applied thereto around rolls 23 and 29 into bight 17 of pressure roll 40 and backing roll 50 wherein ink 27 is deposited upon the uppermost portions 98 of random lines 99 to provide for a surface color thereon different from the base color of wrapping or decorative foil 35. If desired, cooling of layered wrapping foil 65 after pressing inked foil 25 to random lines 99 on decorative foil 35 and prior to stripping carrier 75 from layered wrapping foil 65 in order to transfer ink 27 to the uppermost portions 98 of random lines 99 may take place between laminating pinch roll set 100 and stripping roll 64 by directing a cooling air stream upon surface 28 of carrier 75 and/or upon surface 85 of wrapping or decorative foil 35. Cooling processes are well known in the art and need not be described here. Multiple inked colors may be used to provide for different effects either in a side by side relationship as recited above for Fig. 6 or in additional layers as recited above in the examples of Fig. 1 and 3. It is understood here, that ink 27 may be a single solid color or a variegated ink of multiple colors and/or shades. A laminated decorative molding foil 65 having at least one color of inked foil 25 applied to at least one portion of a hardenable surface sprayed directly upon a wrapping foil 35 is thus produced wherein laminated decorative molding foil 65 may then have an adhesive applied to a surface opposite the laminated coating wherein laminated decorative molding foil 65 is wrapped about and adhered to a substrate 15 to be decorated.

Referring now to Figs. 10 and 4, the random pattern shown in Fig. 4 may be applied directly to a substrate 15 to be decorated by spraying a hardenable substance onto at least one of flat surface 95, rounded edge surface 96, center surface 97 and/or edges 16, 18 of substrate 15 prior to applying inked foil 25 thereto. For instance, a spray nozzle 11A applies a spray of a hardenable substance to selected surfaces 95 - 97 after substrate 15 is advanced through wrapping machine 14 but in advance of the application of inked foil 25 thereto. The

hardenable substance is preferably a hot melt glue but may be another material which can be liquefied, sprayed through nozzle 11A and hardened upon cooling after being applied to substrate 15. Upon laminating inked foil 25A to random lines 99 on substrate 15 and stripping away carrier 75A, a decorative framing piece 94 of the teachings of this invention is made. In Fig. 4, the random pattern appears as random lines 99 on top of substrate 15 after having been decorated with inked foil 25A. While the hardenable substance is still warm, inked foil 25A is applied thereto directly upon the warm uppermost portions 98 of random lines 99 and prior to being passed under pressure roll 40A. Thus, ink 27A is deposited upon the uppermost portions 98 of random lines 99 to provide for a surface color thereon different from the base color of substrate 15 or a decorative wrapping foil 35 previously applied to substrate 15. Wrapping rollers, as are well known in the art and not shown here within wrapping mechanism 114, may be used to apply ink 27A from foil 25A to edges 16 and 18 and/or to apply additional pressure to foil 25A to press ink 27A into grooves between sections 95 - 97 or to flatten out uppermost surfaces 98 to produce a broader random line 99. Substrate 15 is preferably supported on a series of backing rollers 50A in this apparatus wherein backing rollers 50A do not extend beyond edges 16, 18 of substrate 15 in order that wrapping rollers within wrapping mechanism 114 may apply pressure to an underside 42 of substrate 15 along edges 16, 18 thereof. In addition, multiple inked colors may be applied side by side or as an additional layer to provide for different effects as recited above. It is understood here that as recited above, ink 27A may be a single solid color or a variegated ink of multiple colors and/or shades. If desired, cooling of substrate 15 after pressing inked foil 25A to random lines 99 on substrate 15 and prior to stripping carrier 75A therefrom in order to transfer ink 27 to the uppermost portions 98 of random lines 99 may take place between pressure roll 40A and stripping roll 64A by directing a cooling air stream upon surfaces 95 - 97 of substrate 15. Cooling processes are well known in the art and need not be described. A laminated decorative molding having at least one color of inked foil 25 applied to at least one portion of a hardenable surface sprayed directly upon a substrate 15 to be decorated is thus produced.

Referring now to Figs. 7, 8 and 11, a simulated peeled paint 52 or cracked paint 53

surface for an aged picture frame or building trim piece may be produced by the apparatus of this invention. In Fig. 8, a peeled paint surface 52 is shown on the left hand side thereof while a cracked paint surface 53 is shown in the right hand side thereof. Peeled paint 52 appears as random blotches 48 removed from edge 16 and surfaces 96, 97 while surface 95 remains relatively free of random blotches 48 as peeled paint is more prevalent on raised surfaces such as surfaces 96 and 97 and on an outer edge of a frame such as edge 16 than on depressed surfaces such as surface 95 and inner edge 18. Blotches 48 are removed from ink 27 of roll 20 by passing ink 27 over a profile 59 of a profiling sleeve 58 removably affixed to roll 56 and through the bight 57 between roll 56 and a brushing roll 55. Brushing roll 55 contacts the raised surfaces 68 and 67 of profile 59 and removes ink 27 therefrom creating random blotches 48 by varying the pressure, contact and speed of brush roller 55 upon profile 59. Hot transfer foil 25 then passes again around roll 20 and the remaining ink 27 on hot transfer foil 25 is laminated to wrapping foil 35 in bight 17 of pressure roll 40 and backing roll 50 after passing around rollers 23, 29 thus creating layered wrapping foil 65. As wrapping foil 35 has a base color on surface 34 simulating the initial color of a frame piece to be made from substrate 15, blotches 48 show the initial color of surface 34 therethrough on laminated wrapping foil 65 thus simulating paint peeled from surface 34. By laminating another color onto the thus created laminated wrapping foil 65, an effect of a twice peeled paint surface 52 may be created as another color of ink 27 with random blotches 48 removed therefrom may be laminated upon the previously created laminated wrapping foil 65 and thereafter wrapped around a substrate 15. In this manner, a decorative molding wrapping foil 65 comprising a least one hot transfer inked foil 27 carried on a carrier 75 has a portion of the ink thereon removed prior to being laminated onto a planar wrapping foil 35. Specifically, decorative molding wrapping foil 65 comprising a first hot transfer inked foil 25 carried on a carrier 75 has a portion of the ink removed therefrom and laminated onto a planar wrapping foil 35 thereby creating an intermediate laminated wrapping foil 65. Intermediate laminated wrapping foil 65 has carrier 75 stripped therefrom and thereafter further has a second hot transfer inked foil 25 carried on a carrier 75 having a portion of the ink removed therefrom laminated onto intermediate laminated wrapping foil 65 thereby creating a decorative molding

wrapping foil 65 wherein decorative molding wrapping foil 65 is wound upon a roll 60 for use in foil wrapping of a substrate 15 for use as picture frame element or building trim piece. Laminated wrapping foil 65 thus created has portions of at least the base color of planar wrapping foil 35 and may further have portions of first inked foil 25 showing therethrough wherein laminated wrapping foil 65 is wound upon a roll 60 for use in foil wrapping of a substrate 15 for use as picture frame element or building trim piece.

Blotches 48 may also be created by randomly placing raised blotch portions 43 upon surfaces 67, 68 of profile 59 wherein ink 27 is removed from the carrier 75 of hot transfer foil 25 by brush roller 55. In this alternative embodiment, blotches 48 are created in a repeating pattern depending upon the circumferential length of removable profiling sleeve 58 though the amount of removal of ink 27 from carrier 75 may again be varied by varying the speed, amount of contact and pressure of brush roller 55 upon the blotch portions 43 on profile 59. Another random placement of blotches 43 may be made upon profile 59 on another production run of laminated coating 65 thus creating a different peeled paint surface 52 effect than on previous production runs.

In like manner, a cracked paint surface 53 for laminated decorative molding foil 65 is created using profiling sleeve 58 by randomly placing a series of raised lines 49 upon a flat profiling sleeve 58 represented by dashed line 54 producing flat surface 66 across substantially the entire face of profiling sleeve 58 and passing the inked surface 27 of hot transfer foil 25 beneath brush roller 55 thus removing ink from carrier 75 only from the tops of raised lines 49. Thereafter, the remaining ink 28 on carrier 75 is laminated to a base color surface 34 on a wrapping foil 35 thus creating a laminated wrapping foil 65 simulating cracked paint 53. Random lines 49 may be formed upon flat surface 66 of profiling sleeve 58 by depositing a random line of a liquid hardenable material such as a hot glue or other thermoplastic material thereon. Random lines 49 may also be molded upon flat surface 66 of profiling sleeve 58 by imprinting a negative of an actual cracked paint surface thereon using a lithographic process. Other processes of placing random lines 49 upon the flat surface of profiling sleeve are also within the scope of this invention. Paint crack lines 76 in Fig. 8 show the base color of wrapping foil 35 through the crack whereas the remainder of ink 27 deposited upon wrapping

foil 35 would appear as the original paint upon an aged picture frame or building trim piece. As cracked paint on an actual aged picture frame or building trim piece appears substantially over the entirety of the surfaces of the aged picture frame or building trim piece, creating cracked paint lines 49 substantially over the entirety of surface 34 of wrapping foil 35 creates a wrapping foil which covers the entirety of the substrate 15 used as a picture frame or building trim piece. Decorative molding wrapping foil 65 having a cracked paint 53 surface thereon comprises a first hot transfer inked foil 25 carried on a carrier 75 having substantially all of the ink remaining thereon laminated onto a planar wrapping foil 35 thereby creating an intermediate laminated wrapping foil 65. Intermediate laminated wrapping foil 65 has carrier 75 stripped therefrom and thereafter has a second hot transfer inked foil 25 carried on a carrier 75 having substantially all of the ink remaining thereon laminated onto intermediate laminated wrapping foil 65 thereby creating decorative molding wrapping foil 65 wherein decorative molding wrapping foil 65 is then wound upon a roll 65 for use in foil wrapping of a substrate 15 for use as picture frame element or building trim piece. Upon wrapping laminated decorative wrapping foil 65 about substrate 15, a decorative molding piece thus having the appearance of being twice painted wherein the both layers of paint has cracked is thus produced. Similarly, intermediate laminated decorative wrapping foil 65 may be wrapped around substrate 15 to produce a decorative molding piece thus having the appearance of being painted wherein the layer of paint has cracked.

Of course, distressing of a wood grain wrapping foil 35 can be created with the reverse of paint crack lines 76 in the same manner as creating paint crack lines 76 by applying raised blotch portions 43 closely together over the entirety of flat surface 66 of profiling sleeve 58 leaving only narrow lines therebetween these narrow lines akin to the raised surface 33 of embossed pattern 37 shown in Fig. 3. The narrow lines are generally spaced further apart than the raised surface 33 of Fig. 1 to more closely simulate distressing marks found on distressed wood. By providing the raised blotch portions 43 across substantially the entire face of profiling sleeve 58, brush 55 removes substantially all of ink 27 from carrier 75 leaving only the ink 27 between raised blotch portions 43. Carrier 75 with narrow lines of ink 27 thereon is then laminated to a wood grain wrapping foil 35 by passing these two foils 25, 35

around rollers 23, 29 and through bight 17 of heated pressure roll 40 and back up roll 50. Narrow lines of ink 27 then transferred to the wood grain wrapping foil 35 thus creating laminated wrapping foil 65 show a distressed wood grain for wrapping about substrate 15 to create a picture frame or building trim piece having a distressed wood grain appearance. Another method of making a distressed wood grain appearance on a wrapping foil 35 is to replace brush roll 55 of Fig. 7 with a heated roll 155 having raised lines thereon representing the distressing marks. These raised lines, when heated from within roll 155, burn distress marks onto the surface of the wood grain pattern as heated roll 155 is maintained at an elevated temperature sufficient to burn into the impregnated paper generally used as a wrapping foil 35 having a wood grain surface. Wrapping foil 35 having this distressed wood grain appearance may then be wrapped about substrate 15 as is well known in the art.

Referring now to Figs 10, 11 and 13, the preferred method of creating a distressed wood grain appearance on a wrapping foil 35 is to unwrap wrapping foil 35 from roll 30 passing the wood grain surface on surface 34 under brushing roll 55 wherein a portion the surface coating on surface 34 of wrapping foil 35 is removed. Brushing roll 55 may have an abrasive surface randomly arranged thereon and may further have a soft backing behind the abrasive surface to conform to profile 59 on profiling sleeve 58. Profiling sleeve 58 may additionally have random blotches 48 on the portions 66 - 69 thereof and by varying the speed of brushing roll 55 having the random abrasive surface thereon will cause random removal of the portions of the surface coating on surface 34 of wrapping foil 35. After removing the random portions of the surface coating from surface 34 of wrapping foil 35, wrapping foil 35 is passed around rolls 23, 29 and through a staining bath 115 wherein the portions removed from surface 34 accept stain 116 from staining bath 115. The excess of stain 116 is removed from surface 34 by a wiper 117 wherein only a portion of stain 116 remains in the portions sanded from surface 34. As stain 116 is dark in color compared to the wood grain surface of surface 34, an appearance of distressed wood grain is created. Stain 116 on surface 34 is dried by passing wrapping foil 35 through bight 17 of heated top roll 40 and solid bottom drive roll 50 thereby drying surface 34. Wrapping foil 35 is then passed under series of rolls 62 around roll 63 and wound upon take up roll 60. Though a distressed wood grain

appearance has been created staining sanded portions of surface 34, a peeled paint appearance of surface 34 could be created upon a solid color foil by applying a different color of stain 116 to portions of surface 34 that have been removed as described with reference to Fig. 13.

In the same manner as is used for cracked paint 53 recited above, a patterned surface 78 may be created on a substrate to be decorated. Referring specifically to Fig. 9, patterned surface 78 is represented by a series of squares 101 laid obliquely upon substrate 15 across the entirety of the surfaces 95 - 97 thereof and including edges 16, 18 though any pattern on any surface 95 - 97 and/or edge 16, 18 can be made by the methods described herein. Referring to Fig. 7, 9 and 11, a negative of pattern 78 may be created upon flat surface 66 of profiling sleeve 58 by adhesively affixing a patterned paper or cloth upon flat surface 66. Inked foil 25 with ink 27 thereon is then passed around profiling roll 56 with carrier 75 against the patterned cloth or paper on flat surface 66 such that ink 27 is facing brushing wheel 55. Brushing wheel 55 then removes ink 27 from carrier 75 in the areas of the raised patterned cloth or paper represented by squares 101 on flat surface 66 leaving ink 27 on carrier 75 in the areas surrounding squares 101 such that when ink 27 is transferred from carrier 75 onto surface 34 of wrapping foil 35 the base color of surface 34 shows through transferred ink 27. As with other laminated wrapping foils 65 described in the instant invention, inked foil 25 is fed together with wrapping foil 35 through bight 17 of pressure roll 40 and backing roll 50 after being passed around rolls 23, 29 with the now created laminated wrapping foil 65 simulating a patterned surface having carrier 75 stripped therefrom and wound upon take up roll 60.

An alternate method of creating the pattern 78 shown in Fig. 9 is to apply a thin coating of hardenable material to surface 34 of wrapping foil 35 to be decorated in the apparatus of Fig. 1, cooling the coating if necessary, and thereafter passing wrapping foil 35 having the coating thereon through forming rollers 111, 112 and backing roll 113 wherein rolls 111 and 112 are fitted with a removable sleeve having a negative of the desired pattern impressed thereupon. As the coating on wrapping foil 35 may still be warm, patterned surface 34 may readily accept ink 27 from hot transfer foil 25 though ink 27 may be transferred to surface 34 in bight 17 of heated roll 40 and backing roll 50 as is conventional in the processes

recited above. Carrier 75 is removed from laminated wrapping foil 65 and laminated wrapping foil 65 is received on take up roll 60 for use in the wrapping process. Though patterned surface 34 is preferably created while the coating on surface 34 is warm, cold forming of the coating on surface 34 is also contemplated by cooling of the coating on surface 34 prior to passing wrapping foil 35 between forming rolls 111, 112 and backing roll 113. A profile specific patterned surface may be created in this alternate method by placing a removable sleeve each having a different pattern thereon on each of forming rolls 111 and 112.

The pattern of Fig. 9 can also be created directly upon the substrate 15 to be decorated in wrapping machine 14 by applying a thin layer of hardenable material directly upon substrate 15, cooling the hardenable material, forming the cooled hardenable material into a raised pattern 103 surrounding squares 101 using a forming roller 102 and thereafter applying ink 27A from hot transfer roll 20 onto raised pattern 103 surrounding squares 101. Ink 27A is transferred to raised pattern 103 by pressing the inked surface of hot transfer foil 25 against raised pattern 103 under heated roller 40A such that the portion of ink 27A heated by heated roller 40A in contact with raised surface 103 readily transfers. Thereafter, carrier 75A is stripped from substrate 15 leaving an inked, patterned surface upon substrate 15. Other patterns may also be created by this method of cold forming a cooled hardenable material directly applied to substrate 15 and thereafter inked with a colored foil 25. For instance, the embossed pattern in Fig. 3 may be cold formed prior to having hot transfer foil 25 applied thereto. A laminated coating 65A upon substrate 15 is thus created, laminated coating 65A comprising raised pattern 103 of hardenable material laminated with ink 27A of hot transfer foil 25A.

Ornamental work may be added to substrate 15 by forming a hardenable material directly on substrate 15 through carrier 75A prior to stripping away carrier 75A. Referring now to Figs. 10 and 12, substrate 15 is fed through a wrapping machine 14 and has a fluid, hardenable material applied to a surface 95 to be ornamentally decorated with spray nozzle 11 or a composition applying tool. Hot transfer foil 25 is then placed in contact with the hardenable material with ink 27A placed against the still fluid hardenable material by passing

carrier 75A with ink 27A thereon around roll 40A. While still in a fluid state, the hardenable material is formed by a forming roll 106 having negative ornaments 105 thereon, negative ornaments 105 aligned with the desired surface to be ornamented, in this instance surface 95 such that ornaments 104 are formed thereon. Thereafter, substrate 15 and ornaments 104 are cooled and carrier 75A is stripped away leaving ornaments 104 on surface 95 wherein ornaments 104 and the spaces 107 therebetween are fully colored with ink 27A from hot transfer foil 25A. Though surface 95 has been shown as ornamented with ornaments 104, any or all of surfaces 95 - 97 and/or edges 16, 18 could be ornamented with ornaments 104 as desired by the manufacturer of decorative molding. A laminated ornamentation 65B upon substrate 15 is thus created, laminated ornamentation 65B comprising ornaments 104 and the spaces 107 therebetween of hardenable material laminated with ink 27A of hot transfer foil 25A. It may be necessary to spray a release agent upon the laminated ornamentation 65B or the laminated coating 65A in order to facilitate storage and shipping of decorative molding pieces made by the apparatus and method of this invention.

Apparatus 10 preferably has shafts for the various rolls and brushes mounted to a plate 11 with a bearing housing 108 wherein plate 11 may be affixed to a wrapping machine 14 but preferably is a stand alone machine used for making short runs of laminated decorative molding foils 65. Shaft 51 and hence back up drive roll 50 are preferably driven by a suitable prime mover at a speed from about 2 to about 200 feet per minute while rolls 20, 30 have a suitable braking device affixed to shafts 21, 31 respectively. Take up roll 60 and carrier stripping roll 70 are also preferably driven by a suitable prime mover and may be driven from the same prime mover as roll 50. Heated top roll 40 preferably is friction driven from bottom drive roll 50 through contact direct contact and may have a brake affixed to shaft 41. Heated top roll 40 also preferably has raising and lowering mechanisms journaled on shaft 41 so top roll 40 may be moved toward or apart from drive roll 50 in order to vary the pressure top roll 40 places upon foils 25, 35 being layered to produce layered wrapping foil 65. Brushing roll 80 is driven by a prime mover associated with shaft 81 and may also have raising and lowering mechanisms journaled on shaft 81 so brush roll 80 may be moved toward or apart from surface 28 of carrier 75.

Wrapping machine 14 generally has series of rolls 50A, rolls 20A, 40A, 102, 104 and wrapping mechanism 114 affixed to a framework 11A wherein rolls 40A, 102 and 104 are preferably driven by a prime mover for advancing substrate 15 through wrapping machine 14 at a steady pace from about 2 to about 200 feet per minute. Stripping roll 70 is also generally driven by the prime mover at a speed at least equal to the rate of advance of substrate 15 through apparatus 14. Rollers 50A may be rigidly mounted to framework 11A, however, rollers 50A generally are movable toward and away from rolls 40A, 102 and 104 to accommodate different thickness of substrate 15.

While the present invention has been described with reference to the above described preferred embodiments and alternate embodiments, it should be noted that various other embodiments and modifications may be made without departing from the spirit of the invention. Therefore, the embodiments described herein and the drawings appended hereto are merely illustrative of the features of the invention and should not be construed to be the only variants thereof nor limited thereto.